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Mazdoor Kisan Shakti Sangathan

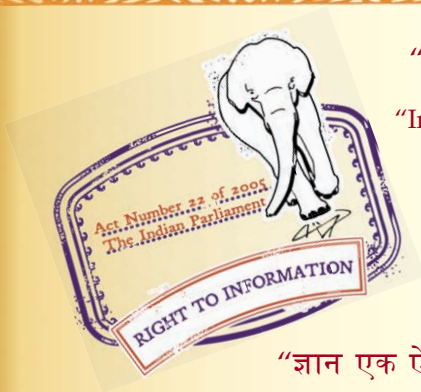
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IS 8439 (1977): Methods for sampling of lead and lead alloys [MTD 9: Lead, Zinc, Cadmium, Tin, Antimony and their Alloys]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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(Reaffirmed 2003)

Indian Standard

METHODS FOR SAMPLING OF LEAD AND LEAD ALLOYS

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METHODS FOR SAMPLING OF LEAD AND LEAD ALLOYS

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Indian Standard

METHODS FOR SAMPLING OF LEAD AND LEAD ALLOYS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 29 April 1977, after the draft finalized by the Lead, Zinc, Tin, Antimony and Their Alloys Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 In order to bring out uniformity and to avoid repetition in describing procedures of sampling in standards relating to lead and lead alloys, need was felt for a standard which should lay down specific procedures for sampling of these alloys and to which reference may be made in relevant standard wherever required.

1. SCOPE

1.1 This standard covers methods of sampling of ingot lead, lead alloy ingots, lead sheets, pipes, etc, for chemical analysis.

2. PROCEDURE

2.1 Ingots

2.1.1 *Lot* — In any consignment, all the ingots of one brand shall be grouped together to constitute a lot.

2.1.1.1 Samples shall be taken and tested from each lot.

2.1.1.2 The number of ingots to be selected from a lot shall depend on the size of the lot as given in Table 1. The ingots shall be taken at random.

TABLE 1 SCALE OF SAMPLING

No. of INGOTS IN A LOT	No. of INGOTS TO BE TAKEN
Up to 4	All
5 to 50	4
51 to 100	7
101 and above	9

2.1.2 Sampling of the Selected Ingots — The ingots shall be placed side by side in rows of three and/or four so as to include all the samples and a line drawn diagonally across the row from the left-hand corner of the first to the right-hand corner of the last ingot ignoring any lug on the ingots.

2.1.2.1 The points opposite to that where the centre line (lengthwise) of each bar and the diagonal, thus drawn, intersects should be located (see Fig. 1). A cut shall be made at this point in a direction perpendicular to the centre line of the ingot. Sawing shall be continued halfway through each ingot. For spectrographic analysis, a slice of required thickness shall be taken and surface prepared and cleaned properly for the analysis.

2.1.2.2 All sawings should be collected and mixed thoroughly. Iron contamination, if any, should be removed by means of a powerful magnet. If any oil is present, the sawings shall be washed in petroleum ether and dried.

2.1.2.3 Sufficient sawings should be taken to provide a representative sample.

2.2 Material Other Than Ingots — At least 1 kg of the material should be taken at random in a manner agreed between the purchaser and the supplier. If parts of the material have to be cut off, this should be done by means of a saw, and the cutting should be carried out so as to obtain a section through the piece.

2.2.1 Where pieces contain inserts, care should be taken to ensure that there shall be no contamination from the different metal.

2.2.2 The sample pieces should be sawn, cut, filed or drilled to provide a fully representative sample. All the prepared samples should be collected and mixed thoroughly. Iron contamination, if any, should be removed by means of a powerful magnet. If any oil is present, the prepared sample shall be washed in petroleum ether and dried.

2.2.3 For the determination of antimony, the sample pieces may be melted, covered with a suitable oil and dip samples taken from which the final sample is cut, filed or drilled as under **2.2.2**.

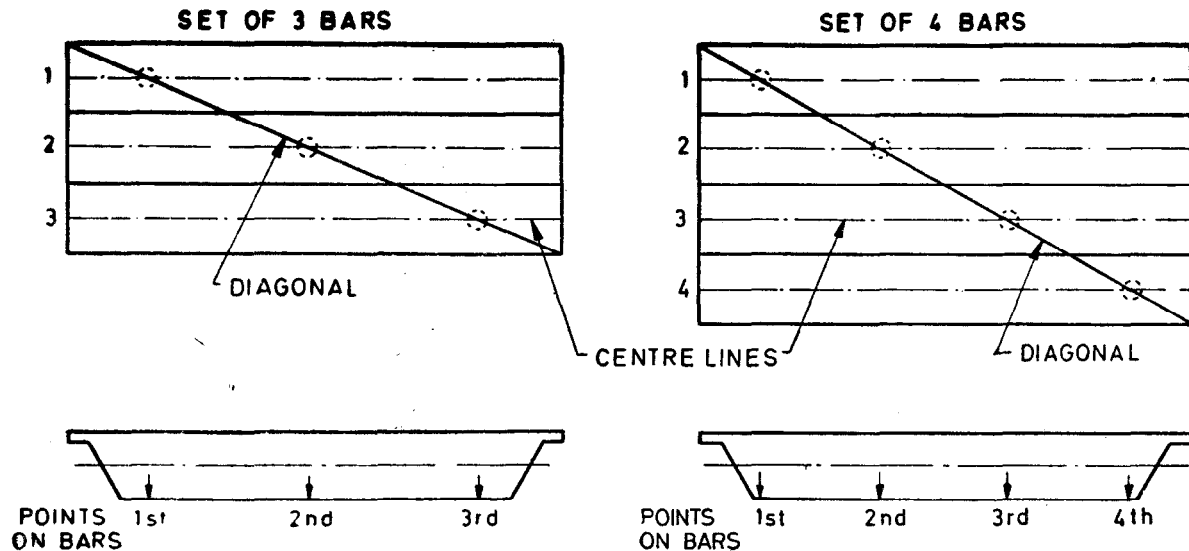


FIG. 1 SAMPLING OF INGOTS

INDIAN STANDARDS

ON

LEAD, ZINC, TIN, ANTIMONY AND THEIR ALLOYS

IS :

- 25-1966 Antifriction bearing alloys (*second revision*)
- 26-1966 Tin ingot (*second revision*)
- 27-1965 Pig lead (*second revision*)
- 193-1966 Soft solder (*second revision*)
- 209-1966 Zinc (*second revision*)
- 211-1977 Antimony (*third revision*)
- 404-1962 Lead pipes (*revised*)
- 405-1961 Lead sheet (*revised*)
- 713-1966 Zinc base alloy ingots for die casting (*revised*)
- 742-1966 Zinc base alloy die castings (*revised*)
- 1339-1965 Lead alloys for sheathing of electric cables (*revised*)
- 1357-1966 Printing metal (*revised*)
- 1654-1966 Antimonial lead (*revised*)
- 1655-1968 Code of practice for manufacture of zinc alloy pressure die castings (*first revision*)
- 1921-1975 Rosin cored solder wire (*first revision*)
- 2258-1967 Rolled zinc plate, sheet and strip (*first revision*)
- 3684-1966 Metal for casting movable types
- 3717-1966 Refined secondary lead
- 4280-1967 Refined secondary tin
- 4699-1968 Refined secondary zinc
- 5479-1969 Solders for jointing aluminium and aluminium alloys
- 6344-1971 Cadmium metal
- 8439-1977 Methods for sampling of lead and lead alloys